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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,109	01/24/2005	Yasuji Taketsuna	122487	9497
25944	7590	02/23/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/522,109

Applicant(s)

TAKETSUNA ET AL.

Examiner

Erik D. Preston

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3 & 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekino et al. (US 5632157).

With respect to claim 1, Sekino teaches a motor for a vehicle comprising: A rotor (Fig. 20, #83) rotating around a horizontal rotation shaft (Fig. 20, #81); a stator core (Fig. 20, #82) having a plurality of slots (in which the coils are wound) in a direction of said rotation shaft in a manner facing a peripheral surface of the rotor; a stator coil (as seen in Fig. 20) wound inside said slots; a cooling passage (as seen in Fig. 20) formed such that said stator coil comes into contact with a cooling liquid; a feeding means (as seen in Fig. 5) for feeding the cooling liquid through said cooling passage; and a discharge portion (Fig. 20, # 112) of said cooling liquid provided in an uppermost portion of said cooling passage; and a supply portion of said cooling liquid provided on a side lower than the discharge portion of the cooling passage (as seen in Fig. 20).

With respect to claim 3, Sekino teaches the motor of claim 1, wherein the supply portion is provided in a lowermost portion of said cooling passage (as seen in Fig. 20).

With respect to claim 4, Sekino teaches the motor of claim 1, wherein the feeding means includes pipes (as seen in Fig. 20) connected to said discharge portion and said

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supply portion respectively, and supply means for supplying said cooling liquid discharged from said discharge portion to said supply portion (as seen in Fig. 5), and said motor further comprises prevention means (the solid walls of the pipe (which inherently exist in the pipes as taught by Kikuchi since it is not disclosed that they leak)) for preventing leakage of said cooling liquid, provided in said pipe.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6515384 supplied by applicant).

With respect to claim 1, Kikuchi teaches a motor for a vehicle comprising: A rotor (Fig. 1, #2) rotating around a horizontal rotation shaft; a stator core (Fig. 1, #5) having a plurality of slots (Fig. 3, #6) in a direction of said rotation shaft in a manner facing a peripheral surface of the rotor; a stator coil (Fig. 1, #8) wound inside said slots; a cooling passage (Fig. 5, #12) formed such that said stator coil comes into contact with a cooling liquid; a feeding means (Col. 3, Lines 17-21) for feeding the cooling liquid through said cooling passage; and a discharge portion (Fig. 1, # 17) of said cooling liquid, but it does not teach said discharge portion being provided at an uppermost portion of said cooling passage, and a supply portion of said cooling liquid on a side lower than the discharge portion of said cooling passage. It would have been obvious to one of ordinary skill in the art at the time of the invention to switch the location of the discharge and supply portions (to an arrangement like the one as shown by US

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4818906, US 5632157 or US 5923108) of Kikuchi since it has been held that changing the position of an element of an invention is prima facie obvious in the absence of new or unexpected results (In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)). Since the fluid is pumped into the cooling passage, and Kikuchi never states that it is vital for the fluid to run from the "uppermost portion" of the motor to the "lowermost portion" (in fact, in Kikuchi's third embodiment, the discharge and supply portions are both located on an upper portion of the motor), it is believed that the positioning of the supply portion on the upper part of the motor, and discharge portions on the lower part of the motor is not vital to the operation of the apparatus so long as all of the coils come in contact with the cooling liquid.

With respect to claim 2, Kikuchi teaches the motor of claim 1, and Kikuchi teaches said cooling passage comprising slots with openings that are covered with sealing members (Fig. 3, #14).

With respect to claim 3, Kikuchi teaches the motor of claim 1, and Kikuchi teaches a supply portion of said cooling liquid in a lowermost portion of said cooling passage.

With respect to claim 4, Kikuchi teaches the motor of claim 1, wherein the feeding means includes pipes (as seen in Fig. 1) connected to said discharge portion and said supply portion respectively, and supply means for supplying said cooling liquid discharged from said discharge portion to said supply portion, and said motor further comprises prevention means (the solid walls of the pipe (which inherently exist in the

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pipes as taught by Kikuchi since it is not disclosed that they leak)) for preventing leakage of said cooling liquid, provided in said pipe.

With respect to claim 5, Kikuchi teaches the motor of claim 4, wherein said supply means is implemented by a pump (Col. 3, Lines 17-21) circulating said cooling liquid, and said prevention means is provided at some portion of the pipe from a protruded outlet of said pump to an inlet of said storage means, but it does not teach that said pipe is provided with storage means for storing said cooling liquid in such a manner that said cooling liquid is in contact with air. However, It was well known in the art at the time of the invention to use a storage means for storing said cooling liquid in such a manner that said cooling liquid is in contact with air (such as is the case in the radiator of an automobile). It would have been obvious to one of ordinary skill in the art at the time of the invention to store the cooling liquid in a radiator because it would allow the liquid to dissipate the heat that it picked up from the coils.

With respect to claims 6 & 7, Kikuchi teaches the motor of claim 5, wherein said prevention means is provided in both the discharge and supply portions.

Claims 8,9 & 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6515384 supplied by applicant) in view of Kimura et al. (US 20020145353). Kikuchi teaches the motor of claims 1-7, but does not teach that the motor is implemented as a distributed winding motor. However, Kimura teaches a motor that has distributed windings (Paragraph 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Kikuchi in view of the windings as taught by Kimura because they make it possible to bring the

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induced voltage waveform closer to sinusoidal waveform by improving the stator wiring layout and to reduce distortion rate (Kimura, Paragraph 4).

### ***Response to Arguments***

Applicant's arguments filed 1/12/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the applicant's invention does not have a complicated structure internal to the cooling chambers) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the applicant's argument that it would not have been obvious to one of ordinary skill in the art at the time of the invention to switch the positions of the supply and discharge portions of Kikuchi, the examiner reaffirms the motivation for the rejection included in the previous office action while also bringing to light several new references.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5770899, US 5923108, US 6489697 & US 2003/0042806

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



02/17/2006

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